# UNITED 2004

**Nebraska's Statewide Technology Plan**

**June 2004**
**State of Nebraska**
**Nebraska Information Technology Commission**
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UNITED 2004 Nebraska's Statewide Technology Plan
is available from the NITC Web site:
http://www.nitc.state.ne.us

# Contents

# Section 1

# Introduction

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**Nebraska's Statewide Technology Plan**

**Section 1**

# Introduction

The Legislature established the Nebraska Information Technology Commission (NITC) in 1998 to provide advice, strategic direction, and accountability on information technology investments in the state.  Section 86-516 directs the NITC to "annually update a statewide technology plan."  *Nebraska's Statewide Technology Plan* for 2004 is the fifth iteration.  The complete plan is available on the NITC Web site (www.nitc.state.ne.us).

To achieve its mandate, the NITC relies on coordination and collaboration to influence a wide range of information technology issues.  The NITC has neither operational authority nor enforcement powers for implementing its policy directives.  The NITC has adhered to the legislative directive in Section 86-513 to "coordinate the state's investment in information technology in an efficient and expeditious manner.  The provisions (of Sections 86-512 to 86-524) are not intended to impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy."

Given these considerations, the purpose of the *Statewide Technology Plan* is to set forth the vision and goals for the use of information technology in Nebraska, with a set of action items that will guide the work of the NITC and its councils.  The *Statewide Technology Plan* does not allocate funding among technology projects.  A different report, "Recommendations on Technology Investments to the Governor and Legislature" provides advice on proposed funding for technology projects, as part of the biennial budget process.

Previous versions of the *Statewide Technology Plan* included two other sections.  One was the Technical Infrastructure, which defined a technical architecture and the process for preparing technical standards and guidelines.  The other section set forth planning and project management requirements.  In the interests of brevity, these sections are now presented as separate documents. Both are located on the NITC Web site.  Both are incorporated into the *Statewide Technology Plan* by reference.  Previous plans also included a status report of what has been accomplished to date, with effectiveness measures to evaluate progress in the future.   Because this information is duplicative with the information which will be presented in the Commission's biennial report to the Legislature, this information is not included in this year's technology plan.

## Role of Advisory Groups

The NITC conducts most of its work through three advisory groups and the Technical Panel.

**Community Council.** The Community Council has 18-24 members from each of its three focus areas (rural and community information technology development, local governments and libraries, and telehealth), resource providers, and other groups as

deemed appropriate by the Community Council and the NITC.   The Community Council focuses on the role of information technology in community and economic development. It seeks to foster the collaborative and innovative use of technology through partnerships between public and private sectors, to improve teleliteracy, and to support community and economic development for Nebraska citizens.

**Education Council.** The Education Council has 16 members, eight representing the K-12 sector, eight representing the postsecondary sector, and four liaisons as representatives of the Department of Education, the Coordinating Commission for Postsecondary Education, the Department of Administrative Services, and the Nebraska Educational Telecommunications Commission.  The Education Council works on common areas of interest in the use of information technology across all sectors of education from elementary through postsecondary levels and including public and private institutions.  The Education Council advises the NITC on education information technology needs, goals, and policy.  The Council identifies, coordinates, and prioritizes matters pertaining to information technology for a more strategic and cost-effective approach to developing the State's education information technology infrastructure.

**State Government Council.**  The State Government Council has 24 members representing state agencies and 2 members chosen from the private sector, with experience in managing major information technology systems.  The mission of the State Government Council is to provide direction and oversight for state government information technology vision, goals and policy.  It promotes collaboration on technology issues among state agencies.

**Technical Panel.**  The Technical Panel is a statutory body, which provides technical analysis and recommendations to the Commission.  The Technical Panel is codified at Neb. Rev. Stat. § 86-521.  It consists of seven members approved by the Commission.  The mission of the Technical Panel is to assist in the development of a statewide technical infrastructure that will be scalable, reliable, and efficient, including a shared statewide telecommunications network.  It provides technical analysis of projects and recommends technical standards and guidelines.

Each of the councils and the Technical Panel has a charter, adopted by the NITC, which establishes the council membership, responsibilities, and meeting procedures.   Charters, proceedings, and other information are available on the NITC Web site.

**Other Coordinating Entities.**  The NITC also recognizes the important contributions of other information technology coordinating entities, such as the Criminal Justice Information Systems (CJIS) Advisory Committee, and the Geographic Information Systems (GIS) Steering Committee.   The CJIS Advisory Committee includes representatives of state and local agencies involved in all aspects of criminal justice.   It conducts strategic planning and sponsors automation and data sharing projects.   Further information about the CJIS Advisory Committee is available at http://www.cjis.state.ne.us/.   The Legislature established the GIS Steering Committee in 1991 (Sections 81-2601 through 81-2605), in an effort to coordinate the implementation of GIS technology by state and local governments in Nebraska.   Membership on the GIS Steering Committee includes local, state, and federal representatives.   Further information about the GIS Steering Committee is available at http://www.calmit.unl.edu/gis/.

The NITC encourages other information technology coordinating entities to collaborate with the NITC and its advisory councils.

# Vision and Goals

The vision of the NITC is to improve the quality of life of all Nebraskans by promoting the use of information technology in education, health care, economic development and all levels of government.  To achieve this vision, the NITC has identified four goals:

1.  Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable, and efficient;

2.  Support the use of information technology to enhance community and economic development;

3.  Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including homeland security;

4.  Promote effective planning, management and accountability regarding the state's investments in information technology.

Section 2 of the *Statewide Technology Plan* presents the NITC vision statement, mission statement, and goals.   This section also addresses the strategic initiatives identified by the NITC and their relationship to NITC goals.

# Strategic Initiatives

The NITC has identified eight strategic initiatives which address the NITC's goals of supporting the development of a robust telecommunications infrastructure; supporting community and economic development; and promoting the efficient delivery of government and educational services.   These are projects that would materially advance the vision and statewide goals as identified by the NITC, that are ready to be implemented, or that require an enterprise approach, involvement by the NITC and cooperation of multiple entities for their success.   By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives.

The eight strategic initiatives, listed under the NITC goal supported, are:

**Supporting the Development of a Robust Telecommunications Infrastructure**

- Nebraska Telehealth Network
- Network Nebraska
- Statewide Synchronous Video Network

**Supporting Community and Economic Development**

- Community IT Planning and Development

**Promoting the Efficient Delivery of Government and Educational Services**

- Nebraska eLearning Initiative
- Enterprise Architecture
- E-Government
- Security and Business Resumption

Each of these strategic initiatives and supporting action plans are discussed in Section 3.


# Action Plan

Section 3 provides a short description of the strategic initiatives identified by the NITC and the action items being undertaken by the NITC and its advisory groups to support the strategic initiatives.   The action items listed by the strategic initiative supported include:

**Strategic Initiative: Nebraska Telehealth Network**

- Community Council Action Item:  Support the Nebraska Telehealth Network

**Strategic Initiative: Network Nebraska**

- Technical Panel Action Item:  Provide Technical Assistance to the Collaborative Aggregation Partnership (CAP) for the Development of Statewide Network Services

- Education Council Action Item: Support the Network Nebraska Initiative

**Strategic Initiative: Statewide Synchronous Video Network**

- Technical Panel and Education Council Action Item:  Develop Statewide Synchronous Video Standards and Recommendations

**Strategic Initiative: Community IT Planning and Development**

- Community Council Action Item:  Support IT Planning and Development through Technologies Across Nebraska

**Strategic Initiative: Nebraska eLearning Initiative**

- Education Council Action Item:  Establish the Nebraska eLearning Consortium to Oversee Development of the Nebraska eLearning System

## Strategic Initiative: Enterprise Architecture

- State Government Council and Technical Panel Action Item:  Recommend Technical Standards, Guidelines, Enterprise Solutions, and Best Practices

- State Government Council Action Item:  Improve Planning Process and Project Management

- Technical Panel Action Item:  Investigate Opportunities for Collaboration

## Strategic Initiative: E-Government

- State Government Council Action Item:  Implement *E-Government Strategic Plan*

## Strategic Initiative:  Security and Business Resumption

- State Government Council Action Item:  Implement Security Policies

**Section 2**

# Goals

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# Section 2
# Goals

# NITC Vision Statement

It is the vision of the NITC to promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans.

# NITC Mission Statement

The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens, regardless of location, while making investments in government, education, health care and other services more efficient and cost effective.

# NITC Goals

The NITC has adopted the following four goals:

1.  Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient.

2.  Support the use of information technology to enhance community and economic development.

3.  Promote the use of information technology to improve the efficiency and delivery of governmental and educational services.

4.  Promote effective planning, management and accountability regarding the state's investments in information technology.

# Strategic Initiatives

The NITC has identified eight strategic initiatives which address the NITC's goals of supporting the development of a robust telecommunications infrastructure; supporting community and economic development; and promoting the efficient delivery of government and educational services.  These are projects that would materially advance the vision and statewide goals as identified by the NITC, that are ready to be implemented, or that require an enterprise approach, involvement by the NITC and cooperation of multiple entities for their success.   By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives.

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## Supporting Community and Economic Development

- Community IT Planning and Development

## Promoting the Efficient Delivery of Government and Educational Services

- Nebraska eLearning Initiative
- Enterprise Architecture
- E-Government
- Security and Business Resumption

Each of these strategic initiatives and supporting action plans are discussed in Section 3.

# NITC Action Plan

Each year the Community Council, Education Council, State Government Council, and Technical Panel identify specific action items on which members and staff will work to directly support the NITC's goals and strategic initiatives.   Section 3 provides further information on each action item.

**Section 3**

# Action Plan

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**Section 3**

# Action Plan

# Summary

The NITC has prepared an action plan consisting of eight strategic initiatives and 11 action items which address the NITC's goals of supporting the development of a robust telecommunications infrastructure; supporting community and economic development; and promoting the efficient delivery of government and educational services.  The NITC's 2004-2005 strategic initiatives and action items are listed below.   A brief description of each strategic initiative and action item is also included in this section.

## Supporting the Development of a Robust Telecommunications Infrastructure

### Strategic Initiative: Nebraska Telehealth Network

- Community Council Action Item:  Support the Nebraska Telehealth Network

### Strategic Initiative: Network Nebraska

- Technical Panel Action Item:  Provide Technical Assistance to the Collaborative Aggregation Partnership (CAP) for the Development of Statewide Network Services

- Education Council Action Item: Support the Network Nebraska Initiative

### Strategic Initiative: Statewide Synchronous Video Network

- Technical Panel and Education Council Action Item:  Develop Statewide Synchronous Video Standards and Recommendations

## Supporting Community and Economic Development

### Strategic Initiative: Community IT Planning and Development

- Community Council Action Item:  Support IT Planning and Development through Technologies Across Nebraska

# Promoting the Efficient Delivery of Government and Educational Services

### Strategic Initiative: Nebraska eLearning Initiative

- Education Council Action Item:  Establish the Nebraska eLearning Consortium to Oversee Development of the Nebraska eLearning System

### Strategic Initiative: Enterprise Architecture

- State Government Council and Technical Panel Action Item: Recommend Technical Standards, Guidelines, Enterprise Solutions, and Best Practices

- State Government Council Action Item:  Improve Planning Process and Project Management

- Technical Panel Action Item:  Investigate Opportunities for Collaboration

### Strategic Initiative: E-Government

- State Government Council Action Item:  Implement *E-Government Strategic Plan*

### Strategic Initiative:  Security and Business Resumption

- State Government Council Action Item:  Implement Security Policies

**NITC Goal**

# Supporting the Development of a Robust Telecommunications Infrastructure

**Strategic Initiative**

## Nebraska Telehealth Network

On December 17, 2002 the Public Service Commission issued an order authorizing the support of telehealth from the Nebraska Universal Service Fund.  The order directed the Nebraska Hospital Association to submit a plan which would define how the Nebraska Universal Service Fund support should be used to support rural health care providers.  A preliminary plan was submitted to the Public Service Commission in late May, 2003.  The Nebraska Hospital Association has continued to work with the hub hospitals to develop a more detailed plan which will also incorporate bioterrorism alerts.  Efforts are also being made to incorporate bioterrorism preparedness into the plan for the Nebraska Telehealth Network.

## Components

- Phase one of the network will include all Nebraska hospitals which currently have videoconferencing equipment or are planning to order equipment.   A router will be installed in College Park in Grand Island to provide a connection among all of the hub hospitals.

- Phase two will address issues such as maintenance, scheduling, operations, and governance.   Additional hospitals will also be added to the network.

## Enterprise Benefits

A telehealth network which connects all hospitals, providing access to consultations with medical specialists, continuing medical education, and bioterrorism training and alerts is critical to the provision of health care in rural areas of the state.   There is a lack of specialist services in rural areas, particularly mental health services.   Telemedicine has proven to be an effective way to provide consultations with specialists.   Currently mental health consultations and teleradiology are the two most common types of specialist services provided via telemedicine.   Rural health care providers also have fewer opportunities for continuing medical education in their community and must often drive several hours to attend training.  Continuing medical education is currently being provided via telehealth in Nebraska and has proven to be an effective and efficient method of delivery.    It is also critical that all hospitals are connected to a telehealth network in order to prepare health care providers to respond quickly to bioterrorism threats and other public health risks.

**Community Council Action Item**
# Support the Nebraska Telehealth Network

The development of a statewide telehealth network will be supported in the following ways:

1.  The NITC and the Telehealth Subcommittee should facilitate communication and coordination among telehealth networks.

2.  The Telehealth Subcommittee and NITC staff should provide continuing assistance to the Nebraska Hospital Association in developing a telehealth plan for the Nebraska Public Service Commission.

3. The NITC Technical Panel should address the need for interoperability.

**Expected Outcomes**

- Telehealth systems in Nebraska will be interconnected.

- The number of critical access and rural hospitals participating in telehealth systems will increase—especially in the second year of implementation of the system.

- The number of telehealth consultations in the state will increase.

- Health care providers will have better access to continuing medical education.

- Specialist services, especially mental health services and teleradiology, in rural areas will be more accessible.

**Lead:**  Telehealth Subcommittee and NITC

**Timeframe:**  June, 2004 - May, 2005

**Strategic Initiative**
# Network Nebraska

The primary objective of this initiative is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska. The Division of Communications and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney, North Platte to the Panhandle. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through local aggregation.
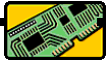
## Components

The major components of this initiative include:

- Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e. local and state government, public and private K-12 and higher education, health care institutions) to purchase the amount of service that the entities need, when they need it, on an annual basis;

- Establishment of a catalog of value-added applications that enables eligible entities to pick and choose services that are pertinent to them (e.g. Internet1, Internet2, and videoconferencing);

- Implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;

- Establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts.

## Enterprise Benefits

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:
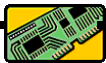
- Lower network costs;
- Greater efficiency for participating entities;
- Interoperability of systems providing video courses and conferencing;
- Increased collaboration among all K-20 educational entities;
- New educational opportunities;
- Competitiveness with surrounding states; and
- Better use of public investments.

**Technical Panel Action Item**
## Provide Technical Assistance to the Collaborative Aggregation Partnership (CAP) for the Development of Statewide Network Services

The Technical Panel will provide technical assistance for the implementation of statewide network services through the Collaborative Aggregation Partnership and related work groups.

**Lead:**  Brenda Decker, Division of Communications

**Timeframe:** Ongoing

**Education Council Action Item**
## Support the Network Nebraska Initiative

The Education Council will provide promotional assistance and customer feedback during the implementation of statewide network services through the Collaborative Aggregation Partnership and related work groups.

**Expected Outcomes:**

- Network Nebraska will be able to attract a greater number of education customers, thereby enabling a greater array of educational services to be offered.

**Lead:**  Education Council and NITC Staff

**Strategic Initiative**
# Statewide Synchronous Video Network

The primary objective of this initiative is to establish an Internet Protocol-based network that will interconnect all existing and future distance learning and videoconferencing facilities in the State of Nebraska. Nebraska currently has approximately 300 high school distance learning classrooms, 30 higher education distance learning classrooms, over 50 State agency videoconferencing rooms, and (soon-to-be) over 60 videoconferencing facilities for Telehealth in local and regional hospitals. More growth and proliferation of distance learning and videoconferencing equipment and sites is expected in the near future. These 400+ interactive video facilities currently utilize a variety of video standards and bandwidth speeds that prevent interconnection between sub-networks. The Statewide Synchronous Video Network, as envisioned, would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites simultaneously.

## Components

The major components of this initiative include:

- A single, interconnected synchronous video network with various levels of authorization and traffic prioritization;

- An event clearinghouse and scheduling system that would allow registration for interactive video events;

- Development of a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic.
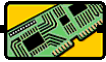
## Enterprise Benefits

Interactive videoconferencing and distance learning developed rapidly across Nebraska in the 1990's. Prior to recognized video standards or a coordinating body, entities were free to adopt any equipment, standard, or system that met their needs. Little thought was paid to interconnectivity or compatibility. Consequently, Nebraska became a state of disparate, redundant systems that prevented multi-jurisdictional collaboration or maximization of educational opportunities outside of a particular geographic boundary or system.

 The enterprise benefits of an interconnected video system include:

- Greater sharing of educational courses, events, and training across sub-network boundaries, irrespective of geography;

- More efficient use of available resources—more classrooms and sites are available within less distance of the user at more convenient times;

- One-to-many videoconferencing capabilities for news alerts, bioterrorism alerts, or other emergency uses;

- Collaborative development across various service agencies (i.e. medical services to schools, adult and continuing education opportunities).

**Technical Panel and Education Council Action Item**
## Develop Statewide Synchronous Video Standards and Recommendations

The Statewide Synchronous Video Work Group was chartered by the Technical Panel on November 8, 2002 to develop the technical and non-technical recommendations needed in order to provide for a statewide, interconnected, synchronous video network serving citizens involved with education, state government, and telehealth.

The major action items of this initiative include:

- Identification of a single audio and video standard for low-bandwidth distance learning and videoconferencing;

- Acquisition of upgrade or replacement equipment and/or software that ensures compliance with the audio and video standard;

- Development or purchase of a scheduling system or enterprise resource management program that allows potential users to A) know the location and availability of resources, and B) set up or reserve ad hoc or regularly scheduled events with other entities;

- Development of a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic;

- Development of an event clearinghouse that allows promotion, marketing, and registration for interactive video events;

- Training modules for new users;

- Development of a funding algorithm to allow shared use of the statewide backbone.

**Expected Outcomes**

- Nebraska will derive more efficient and cost-effective use of its synchronous video assets and ultimately increase lifelong learning and training opportunities.

**Lead:** Statewide Synchronous Video Network Work Group and Education Council

**Timeframe:** July, 2004 – June, 2005

**NITC Goal**

# Supporting Community and Economic Development

**Strategic Initiative**

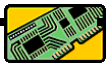# Community IT Planning and Development

Information technology is transforming the economy and society, creating a completely new paradigm.  In response to these changing conditions, communities are finding that economic and community development processes need to be retooled.  In order to compete in the global economy, communities need access to advanced telecommunications services and a tech-savvy workforce.  Businesses need to understand how to utilize technology to expand their markets, increase efficiency, and reduce costs.  Information technology can also enhance quality of life by improving access to health care, educational opportunities, and community information.

## Components

- **Community Leadership and Support.**   Through the IT Planning and Mini Grant program, communities in Nebraska are forming local technology committees and developing technology plans.   Each year, up to eight communities are able to participate in the program.

- **Telecommunications Infrastructure.**   Communities need access to broadband Internet service, wireless telephone service, and advanced telephone services such as voice mail.  In the next few years, Voice Over IP may be another services that businesses require in order to relocate or expand in a community.

- **Technology Literacy and Access.**  Community residents need access to basic computer and Internet training as well as access to the Internet at public libraries or community technology learning centers.

- **Advanced Technology Training**.   Businesses need access to advanced technology training for their employees.

- **Economic Development and E-commerce.**  Economic developers need to understand the needs of technology-intensive businesses.   In order to remain competitive, small businesses need to begin utilizing information technology to expand their markets, reduce costs, and increase efficiency.

- **Community Services and Information.**   Local governments and other community organizations can use telecommunications to provide services and to improve communication with customers.   In many communities, telecommunications can improve access to health care.

## Enterprise Benefits

For many years, Nebraska has experienced a two-tier economy:  prospering metropolitan areas and economically challenged rural areas.   If rural communities do not utilize technology effectively to enhance development opportunities, the gap between metropolitan and rural areas will continue to grow.

**Community Council Action Item**
**Support IT Planning and Development through Technologies Across Nebraska**

The NITC Community Council will support community IT development by working with the University of Nebraska and other Technologies Across Nebraska Partners, including the following action steps:
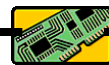
- Pending the availability of funding, work with 8 community or regional technology committees to develop community or regional IT plans through the 2004-2005 Community IT Planning and Mini Grant program.

- Provide continuing support for the 17 community and regional technology committees which have participated the 2002-2003 and 2003-2004 IT Planning and Mini Grant programs.

- Work with the Nebraska Rural Initiative and the Nebraska Rural Development Commission on efforts to promote and coordinate e-commerce training across the state**.**

- Continue partnering with Technologies Across Nebraska and the University of Nebraska to promote technology-related development through the quarterly newsletter, *TANgents*.

- Continue to maintain and update the TAN and Community IT Toolkit Web sites, including adding funding information.

- Work with the Nebraska Rural Initiative to explore the expanded use of youth to assist in IT development activities.

- Provide and/or promote training opportunities on effectively using technology to enhance development opportunities and the delivery of services, especially in the area of IT-related economic development.

***Support IT Planning and Development through Technologies Across Nebraska—Continued***

**Expected Outcomes**

- Communities in Nebraska will make progress toward becoming Information Age communities;

- Communities will have easy access to information and resources to assist them in developing their capacity to use information technology for community and economic development.

**Lead:** Technologies Across Nebraska and Community Council

**Timeframe:** June, 2004 - May, 2005

**NITC Goal**

# Promoting the Efficient Delivery of Government and Educational Services

**Strategic Initiative**

# Nebraska eLearning Initiative

The primary objective of this initiative is to promote the effective and efficient integration of technology into the instructional process and to utilize technology to deliver enhanced educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

This initiative also involves the establishment of a Nebraska eLearning Consortium to organize and facilitate the development and execution of a P-20+ statewide eLearning strategy to:

- Connect eLearning innovators and leverage their expertise and experience;

- Build collaborative relationships between K-12 and Higher Ed educators;

- Develop discipline-specific and age-specific instructional design models;

- Encourage the development and sharing of instructional content; and

- Ensure the infrastructure required to support the deployment and ongoing support of eLearning is in place and available.

The eLearning Consortium would also be responsible for providing administrative and technical support to include: the negotiation of required hardware and software purchasing and licensing agreements; developing and implementing deployment strategies; facilitating the establishment of statewide eLearning organizations; and providing hosting, training, and technical support services as necessary.

## Components

The primary components of this initiative are:

1. **Course Management Software.** This technology supports the development and delivery of instructional content, assessment and grading, lesson planning, and provides learners with instructional support features to include interactive chat and threaded discussion groups, linkage to reference materials, etc.

2. **Content Management Software.** This technology would serve as the basis for the establishment of a Nebraska eLearning Knowledge Repository to facilitate the sharing of educational content. This Knowledge Repository would provide the ability to store, organize, classify, categorize, control access to, share, retrieve,

and present digital content of all forms to include audio, video, graphical, and textual.

3. **Infrastructure.** This includes the network, organizational, administrative, and support resources required to deploy and support eLearning statewide.
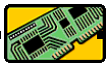
The primary access and delivery medium for eLearning will be the Internet. Therefore, the availability of a robust statewide network providing sufficient bandwidth to support the deployment of eLearning across the state of Nebraska is essential.

## Enterprise Benefits

Establishing a statewide eLearning strategy is critical. The costs associated with the deployment of an efficient and effective eLearning environment are expected to be substantial. However, the costs of not acting and implementing a statewide eLearning strategy will be even higher in terms of maintaining a highly literate and employable work force. A standards-based eLearning strategy will provide students and teachers all over Nebraska equitable access to rich instructional resources not currently available at a time when educational resources are being depleted in many areas of the state.

The enterprise benefits of a statewide eLearning system would include:

- The sharing of learning objects and other educational content and reference materials that would significantly enrich and deepen the learning experiences offered to Nebraska students, particularly those in the K-12 sector;

- Greater collaboration between educators at all levels;

- The building of extended educational communities of learning and support for ongoing professional development and lifelong learning opportunities;

- Creation of a dual-use training engine for other state agencies, political subdivisions, and adult continuing education;

- Development of diverse instructional and training modules ranging from the simple (how to operate a piece of machinery) to the complex (a web-based course to achieve technician certification).

**Education Council Action Item**
## Establish the Nebraska eLearning Consortium to Oversee Development of the Nebraska eLearning System

A statewide eLearning Consortium to advance the Nebraska eLearning Initiative and improve coordination between K-12, higher education, and adult/continuing education will be established using the following action steps:

- Organize a Summer 2004 Planning Workshop to bring together potential participants who have a stake in improving educational and training opportunities for Nebraska citizens.  Objectives of the workshop would be to:

  o Define statewide eLearning goals and objectives;
  o Develop draft documents to address the issues of definition, organization, structure, representation, accountability, authority, etc;
  o Identify potential sponsor(s) and funding source(s);
  o Develop an action plan and timeline to activate the Nebraska eLearning Consortium.

- Develop a design document detailing the technology components, standards, costs and administration of a Nebraska eLearning Knowledge Repository for the sharing of educational content. This Knowledge Repository would provide the ability to store, organize, classify, categorize, control access to, share, retrieve, and present digital content of all forms to include audio, video, graphics, and text.

- Work with education and staff development professionals to document strategies, techniques and tools used in course management and create a clearinghouse of eLearning best practices and training modules.

- Explore cost-efficient options for the aggregated purchase of course management software for the State of Nebraska.

- Convene focus groups composed of formal education and public entities to A) determine the present state of eLearning in Nebraska; B) compare the present state of eLearning to the desired goals of the eLearning Initiative; and C) communicate the gap analysis to elected officials and policy makers.
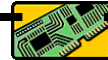
*Establish the Nebraska eLearning Consortium to Oversee Development of the Nebraska eLearning System—Continued*

**Expected Outcomes**

- Nebraska citizens and students will enjoy greater access to more flexible lifelong learning opportunities which should aid in workforce development.

- Nebraska's economic engine will be improved through greater retention of high school and college graduates.

**Lead:** Nebraska eLearning Initiative Steering Committee and Education Council

**Timeframe:**  July, 2004 - June, 2005

**Strategic Initiative**
# Enterprise Architecture

Enterprise Architecture Framework can be described as a methodology for developing an organization's IT support functions.  Ideally, when governments establish their infrastructures using common enterprise architecture, making systems work together will be simpler because each would have addressed the items that are crucial to interoperability of systems developed for specific business needs.

Enterprise Architecture supports the business of government, enables information sharing across traditional barriers, enhances government's ability to deliver effective and timely services, and supports agencies in their efforts to improve government functions and thereby services.

The State Government Council will serve as a "committee-of-the-whole" to develop the enterprise architecture.  The enterprise architecture will focus on those areas that provide opportunities for cost sharing, data sharing and enhancements that affect multiple agencies rather than a single entity.  It is not feasible for the enterprise architecture to address every technical detail for every agency.  All agencies should have an opportunity to review and comment on the enterprise architecture as it evolves.

The State Government Council looked at several enterprise architecture methodologies. There was consensus to investigate the methodology developed by the National Association of State CIOs (NASCIO), because it was designed for state government and reflects the need for a high level perspective, rather than one that is too detailed.

## Components

Developing the Enterprise Architecture will include the following activities:

1.  Readiness Assessment
    *   **NASCIO *EA Maturity Model v1.3.*** The *EA Maturity Model* is a series of benchmarks for evaluating a state's current capabilities in 8 areas.

    *   **NASCIO *EA Assessment Preview*.** The *EA Assessment Preview* provides an introduction to the EA Readiness Assessment, as well as a listing of each question that will be included in the on-line assessment.)

    *   **NASCIO On-Site Visit.**  A three- or four-person team will make an on-site visit to explain the assessment process and the NASCIO EA methodology. The team will include NASCIO staff and representatives of two states that have been using the NASCIO methodology.

    *   **EA Assessment Summary Report.**  The NASCIO team will review and analyze the results of the EA Assessment Preview and onsite visit.  The NASCIO team will also prepare an EA Readiness Assessment Summary Report for Nebraska.  The summary report will identify potential next steps for further development of the EA Program.

2.  **NASCIO** *Enterprise Architecture Development Tool-Kit v2.0.*  The Tool-Kit
    provides a comprehensive set of materials for developing the Enterprise
    Architecture.  It includes a framework consisting of governance, business
    architecture, technology architecture, and standards and guidelines.  These four
    areas provide the foundation for the Enterprise Architecture by identifying business
    needs, technological direction, and processes. A copy of the tool-kit is available at
    the NASCIO website: www.nascio.org.

## Enterprise Benefits

A successful enterprise architecture will provide the following benefits:
- Lower costs;
- Easier interoperability among systems;
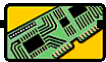- Greater data sharing;
- Improved services.



**State Government Council  and Technical Panel Action Item**
### Recommend Technical Standards, Guidelines, Enterprise Solutions, and Best Practices

The State Government Council will recommend technical standards, guidelines,
and enterprise solutions for state government. The Technical Panel, with input
from the NITC councils and other coordinating entities, will recommend the
adoption of technical standards, guidelines, and best practices.

**Lead:**  State Government Council work group(s) to be created and Technical
Panel work groups assigned by subject.

**Timeframe:**  June, 2004 – July, 2005

**State Government Council Action Item**
## Improve Planning Process and Project Management

In order to improve the information technology planning process for state agencies, the State Government Council will review, and revise as appropriate, the planning documents utilized by agencies, including: agency comprehensive information technology plans and agency project proposal forms for budget requests. The review will include recommendations for improving the cost-benefit analysis information provided with project proposals. The State Government Council will continue to provide guidance to agencies on best practices for project management. Areas of focus should include: management of IT related projects; measuring results; preparing project closure reports; and recommendations for a certification process for project managers.

**Lead:**  Office of the CIO

**Timeframe:**  3rd Quarter 2004 - Review and revise project proposal form and review process documents in advance of the next biennial budget process.

**Technical Panel Action Item**
## Investigate Opportunities for Collaboration

The Technical Panel will examine opportunities for collaboration and efficiencies to be gained by sharing resources and expertise.

**Lead:** To be determined

**Timeframe:** Ongoing

**Strategic Initiative**

# E-Government

The State Government Council has adopted and annually updates the *E-Government Strategic Plan for Nebraska State Government*. The principles guiding the plan are:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;

- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;

- Agencies have responsibility for performing statutory functions, which means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve the greatest benefit;

- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;

- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues; and

- E-government is defined as the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships.

The plan includes 26 specific actions and recommendations for implementing e-government. The current version of the plan is available on the NITC's Web site at http://www.nitc.state.ne.us/.

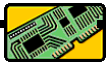## Components

The three goals for e-government are:

1. **Government-to-Citizen and Government-to-Business.** Anyone needing to do business with state government will be able to go to the state's Web site, easily find the information or service they need, and if they desire, complete all appropriate transactions electronically. The plan contains 17 action items in the following areas: citizen portal enhancement; business portal enhancements; education portal; and forms automation.

2. **Government-to-Government.** State agencies will improve services and increase the efficiency and effectiveness of government operations through collaboration, communication, and data sharing between government agencies at all levels.

3. **Government-to-Employee and Internal Operations.**  Agencies will examine internal operations to determine cost-effective e-government applications and solutions. The purpose of these efforts is to improve efficiency and effectiveness by replacing manual operations with automated techniques.

## Enterprise Benefits

The *E-Government Strategic Plan* includes a discussion of the benefits of e-government and a detailed list of actions and recommendations. The primary benefits are:

1. Improved services for citizens and businesses.

2. Increased efficiency and effectiveness for agencies.



**State Government Action Item**
## Implement *E-Government Strategic Plan*

 In March 2003, the State Government Council adopted a revised *E-Government Strategic Plan for Nebraska State Government*. The plan sets out specific actions and recommendations for this priority. (http://www.nitc.state.ne.us/sgc/documents/egovstrategy_20030313.pdf)

**Lead**:  Office of the CIO

**Timeframe:**  Ongoing

**Strategic Initiative**
# Security and Business Resumption

This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the state's information technology resources. Information security will serve statutory goals pertaining to government operations and public records. These include:

1. Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Nebraska Revised Statutes Sections 28-901 and 84-1201);

2. Protect safety and integrity of public records (Nebraska Revised Sections 28-911, 29-2391, and 84-1201);

3. Prevent unauthorized access to public records (Nebraska Revised Statutes Sections 29-319, 81-1117.02, and 84-712.02);

4. Insure proper use of communications facilities (Nebraska Revised Statutes Section 81-1117.02); and

5. Protect privacy of citizens (Nebraska Revised Statutes Section 84, Article 7).
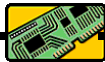
## Components

Major activities include:

1. Developing an overall security strategy, including policies, security awareness, and security infrastructure improvements;

2. Network security standards and guidelines;

3. Education and training;

4. Authentication (directory services project);

5. Disaster recovery for information technology systems (as part of a broader business continuity planning);

6. Compliance with federal privacy and security mandates;

7. Security assessments.

## Enterprise Benefits

Benefits will include:

- Lower costs by addressing security from an enterprise perspective;
- Cost avoidance;
- Protecting the public trust.

**Technical Panel Action Item**
## Implement Security Policies

In January 2001, the NITC adopted the security policies developed by the Technical Panel's Security Architecture Work Group. These policies, guidelines, and best practices are intended to provide a framework for a secure computing environment, with a focus on state government. The State Government Council, in coordination with the Technical Panel, will work to implement these policies in state government. Security related issues to be addressed include directory services, security assessments, security awareness, disaster recovery, training, and incident response.

**Lead:**  Office of the CIO (Technical Panel's Security Work Group)

**Timeframe:**  June, 2004 through July, 2005